Sri Datta Budaraju

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EDUCATION

- **KTH Royal Institute of Technology**   Stockholm, Sweden
  Master of Science in Computer Science; Track: Machine Learning   *Aug. 2018 - Present*
  Relevant Courses: Deep Learning, Project Course in Robotics and Autonomous Systems, Speech and Speaker Recognition, Speech Technology, Artificial Intelligence, Machine Learning
- **Amrita Vishwa Vidyapeetham**   Coimbatore, India
  Bachelor of Technology, Computer Science; GPA: 8.69   *Aug. 2015 - July 2018*
  Relevant Courses: Intelligent Systems, Digital Image Processing, NLP, Python, Probability, Optimization

CERTIFICATIONS

- **DeepLearning.ai Specialization by Andrew NG**: 5 courses: Neural Networks and Deep Learning, Improving Deep Neural Networks, Structuring Machine Learning Projects, Convolutional Neural Networks, Sequence Models
- **Self-Driving Car Fundamentals by Udacity**: HD Maps, Localization, Perception, Planning, Prediction and Control

EXPERIENCE

- **KTH Formula Student**   Stockholm, Sweden
  Lead Perception Engineer - Driverless F1 racing   *Oct. 2018 - Present*
  - **Calibration and Data Collection**: Calibration of Lidar and camera. Set up race tracks using color-coded traffic cones and collected training data using Velodyne VLP 16 Lidar and Zed Camera. Annotating images and 3d point cloud for training and validation
  - **Object Detection**: Working on squeeze net inspired Deep learning models and point cloud clustering techniques to detect cones and provide real-time object detection for a racing scenario
- **DataKind - Google.org**   Remote
  Proposal Reviewer - Google AI's Impact Challenge for Social Good   *Jan. 2019 - Feb 2019*
  - **AI Project Review**: Assess the feasibility and scalability of AI based project by companies seeking Google fund
- **Amrita Multidimensional Data Analysis Lab**   Coimbatore, India
  Research Assistant - Supervised by Dr. Vidhya Balasubramanian, Ph.D., UCI   *March 2017 - March 2018*
  - **WiFi Experiments**: Set up an environment with 8 WiFi routers and 8 BLE beacons in the university building and studied the WiFi patterns in complex indoor environments and analyzed the trends in 2.4 and 5GHz.
  - **Localization Algorithms**: Multi-point triangulation techniques with Weighted Dynamic Circle Expansion to pin point the mobile device. Deployed the system as android application to record IMU sensor data, dual band WIFI and BLE signal readings. Process the collected input to display the estimated pinpoint location on a scaled map
- **GeeksforGeeks**   Coimbatore, India
  Campus Ambassador   *Aug. 2017 - Aug. 2018*
  - **Workshops**: Organized hands-on workshops for students and trained around 200 fellow students in Android development. Collaborated with the best of them on an official application for the university.

PROGRAMMING SKILLS

- **Languages**: Python, MATLAB, Java, C, C++, PDDL
- **Libraries**: OpenCV, Keras, TensorFlow, PCL, OpenGL
- **Computing platform**: ROS, Ubuntu, Android, Arduino, Colabs, Firebase, Raspberry Pi, Windows

PROJECTS

- **Real-time Swedish Traffic Sign Detection in ROS**: Darknet, Python, ROS, Google Colabs   *Feb 2019 - Present*
  Collected and trained data from drone footage of 15 Swedish Traffic signs and integrated the Deep Learning model in Robot Operating System for real-time detections from the drone's camera feed. Part of supervised project at KTH.
- **Facebook Wav2Letter++ ASR on Swedish Speech**: W2L, Python, NST   *Feb 2019 - March 2019*
  Pre-processed NST's Acoustic database for Swedish, to suit the Wav2Letter architecture, generating Language model and tokens and tuning hyper parameters to study the working of W2L on Swedish language
- **Accident Anticipation using Deep Learning**: Python, Keras, Google Colabs   *April 2018 - July 2018*
  Real-time accident detection in videos using Hierarchical Recurrent Neural Networks with LSTM cells for scene understanding for autonomous vehicles. Trained the Neural Network using hand sampled accident clips from YouTube
- **Twitter'e'con - Live Sentiment Analysis**: Python, NLTK, Sci-Kit, Tweepy, TKinter   *Sept. 2017 - Oct. 2017*
  Sentimental Analysis tool to analyze real-time trends of specific keywords in Twitter feeds. Classified live tweets from twitter API using ensemble modeling and implemented live graphical visualizations
- **Safe Rider - Drive Assistant**: Java, Android Studio, Google Maps APIs, Firebase   *Oct. 2017 - Jan. 2018*
  Road safety Voice assistant which warns riders of road hazards like potholes in real-time. Won 1st prize in a 24 hours hackathon hosted by Internet and Mobile Association of India

PUBLICATION

- **An Inventive and Innovative alternative for legacy chain pulling system through Internet Of Things**-
  Budaraju Sri Datta et al. Indonesian Journal Of Electrical Engineering And Computer Science, 6(3), 688-694. *May 2017*